

ABSTRACT

A semiconductor wafer (70) that includes a support body (72), at least one thin die (20, 60), and a plurality of tethers (78, 178). The support body (72) is made of a semiconductor material. The thin die (20, 60) has a circuit (21) formed thereon and

5 has an outer perimeter (74) defined by an open trench (76). The open trench (76) separates the thin die (20, 60) from the support body (72). The tethers (78, 178) extend across the open trench (76) and between the support body (72) and the thin die (20, 60). A method of making a thin die (20, 60) on a wafer (70) where the wafer (70) has a support body (72), a topside (82) and a backside (90). A circuit (21) is formed

10 on the topside (82) of the wafer (70). The method may include the steps of: forming a cavity (88) on the backside (90) of the wafer (70) beneath the circuit (21) that defines a first layer (92) that includes the circuit (21); forming a trench (76) around the circuit (21) on the topside (82) of the wafer (70) that defines an outer perimeter (74) of the thin die (20, 60); forming a plurality of tethers (78, 178) that extend across

15 the trench (76) and between the wafer support body (72) and the thin die (20, 60); and removing a portion of the first layer (92) to define the bottom surface (75) of the thin die (20, 60).